



Journalist writing about inaccurate information in your research papers

Kang Zhang <kang.zhang@gmail.com>
To: jillcastellano@inewssource.org

Wed, Jul 17, 2019 at 10:34 AM

Dear Ms. Castellano,

It is not unusual for groundbreaking research involving innovative treatments to invite criticism, especially from persons who are wed to the pre-existing treatments. There is a forum for such criticism of peer-reviewed articles, and the response, in the academic journals in which the research is published. That forum was used and a healthy dialogue ensued about the study about which you have invited comment. Please note the comments published by these two ophthalmologist groups and our response have been rigorously adjudicated and approved by a panel of world's top experts in this field invited by Nature, who also reviewed and approved our initial publication.

A team of researchers worked on the study, not just me. You will note that I was not listed as the first or last author which are the positions reflecting the largest contributions. But I, and, I believe, the entire team would stand by the quality of the research notwithstanding the criticism. I believe you are, or should be, in touch with at least Doctor Liu and Dr. Maas, who I believe are quite willing to address your questions about the study.

The study was not "unethical, misleading, or dangerous." The study followed international standards and requirements for clinical trials and received appropriate Institutional Review Board oversight.

Performing surgeries on both eyes of the patients was a thoughtful decision and was done to prevent an imbalance of vision and increased risk of amblyopia, as explained by Dr. Liu.

You have been misled if you have been told that animal testing did not precede human testimony. Safety and efficacy were established with rabbits and monkeys prior to studying the procedure on human patients.

The insinuation that the results were somehow inaccurate was addressed (and debunked) by the research team in response to the same criticism leveled in Nature. The response included the following:

While these lenses were mostly clear (particularly in the visual axis), we did not claim that they were completely normal and explicitly acknowledged their imperfections, which mainly reflected loss of LECs, mild peripheral scarring at the capsulorhexis site, and anterior–posterior capsule adhesions that resolve over time. The histopathology sections interpreted by Vavvas et al. as showing small or irregular lenses were intentionally cut offset from the axial centre of the lens to minimize disruption to the lens cortex. Furthermore, dissected lenses often shrink upon alcohol dehydration. Thus, irregularities in size or shape were essentially fixation artefacts.

Regarding visual outcomes, the studies cited by Vavvas et al. are not comparable to ours for several reasons. First, the mean age was higher (5.3 years and 10.2 years compared with under 2 years in our study), which may have confounded visual outcomes, as the IATS noted that follow-up length can affect visual acuity comparisons⁴. Second, the evaluation of visual acuity differed (Teller Acuity Cards for visual resolution versus Snellen Visual Acuity

for visual recognition). Although Teller cards can be roughly translatable to Snellen equivalents, accuracy and false comparison concerns usually preclude this.

In commenting on our outcomes, Solebo et al. did not account for normal age-related changes in visual acuity. During development, 20/200 is close to normal vision for six months of age, and **20/50–20/80** is close to normal vision for one year of age, depending upon the method of testing used. The visual acuity levels in our population were appropriate and not inferior to their results if age is appropriately considered. In addition, an error in vision reported in our initial paper was corrected in a subsequent Corrigendum. Therefore, their comments on our visual acuity results are now out of context and inaccurate.

The research was properly conducted and it supported both a new approach to the treatment of cataracts and a new paradigm for using stem cells in enabling humans to regenerate tissue. It thereby revealed an immense potential for alleviating suffering and improving the quality of life for countless people well beyond the field of ophthalmology.

Thank you for allowing me to respond to your questions.

Kang Zhang, MD, PhD

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